

SEQUENCE LISTING

(I) GENERAL INFORMATION:

- (i) APPLICANT: Yeaman, Michael R.
Shen, Alexander J.
- (ii) TITLE OF INVENTION: Antimicrobial Peptides And Derived Metapeptides
- (iii) NUMBER OF SEQUENCES: 95
- (iv) CORRESPONDENCE ADDRESS:
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 - (C) CITY: Los Angeles
 - (D) STATE: California
 - (E) COUNTRY: USA
 - (F) ZIP: 90024
- (v) COMPUTER READABLE FORM:
- (A) MEDIUM TYPE: Diskette, 3.50 inch, 1.44 Mb storage
 - (B) COMPUTER: Hewlett Packard
 - (C) OPERATING SYSTEM: WINDOWS 95
 - (D) SOFTWARE: WordPerfect 8.0
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- (A) APPLICATION NUMBER:
 - (B) FILING DATE:
 - (C) CLASSIFICATION
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- (A) APPLICATION NUMBER: 09/025,319
 - (B) FILING DATE: February 18, 1998.
- (viii) ATTORNEY/AGENT INFORMATION:
- (A) NAME: 1) Drucker, I. Morley
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 - (B) REGISTRATION NUMBER: 1) 19,751

2) 29,422

(C) REFERENCE/DOCKET NUMBER: REI 50480

(ix) TELECOMMUNICATION INFORMATION:

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(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 74

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: PMP-2

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(x) PUBLICATION INFORMATION

(A) AUTHORS: Yeaman, M.R., et al.

(B) TITLE: Purification and in vitro activities of rabbit platelet microbicidal proteins

(C) JOURNAL: Infect. Immun.65

(F) PAGES: 1023-1031

(G) DATE: 1997

(K) RELEVANT RESIDUES IN SEQ ID NO: 1: FROM (1) TO (74)

(x) PUBLICATION INFORMATION

(A) AUTHORS: Yeaman, M. R.;
Puentes, S. M.;
Norman, D. C.;
Bayer, A. S.

(B) TITLE: Partial purification and staphylocidal activity of thrombin-induced platelet microbicidal protein.

(C) JOURNAL: Infect. Immun.

(E) ISSUE: 60

(F) PAGES: 1202-1209

(G) DATE: 1992

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

Ser Asp Asp Pro Lys Glu Ser Glu Gly Asp Leu His Cys Val
10

Cys Val Lys Thr Thr Ser Leu Val Arg Pro Arg His Ile Thr Asn
20

Leu Glu Leu Ile Lys Ala Gly Gly His Cys Pro Thr Ala Asn Leu
30 40

Ile Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu Gln
50

Ala Ala Leu Tyr Lys Lys Lys Ile Ile Lys Lys Leu Leu Glu Ser
60 70

(2) INFORMATION FOR SEQ ID NO: 2:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 74

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: PMP-1

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(x) PUBLICATION INFORMATION

(A) AUTHORS: Yeaman, M.R., et al.

(B) TITLE: Purification and in vitro activities of rabbit platelet microbicidal proteins

(C) JOURNAL: Infect. Immun.65

(F) PAGES: 1023-1031

(G) DATE: 1997

(K) RELEVANT RESIDUES IN SEQ ID NO: 2: FROM (1) TO (74)

(x) PUBLICATION INFORMATION

(A) AUTHORS: Yeaman, M. R.;

Puentes, S. M.;

Norman, D. C.;

Bayer, A. S.

(B) TITLE: Partial purification and staphylocidal activity of thrombin-induced platelet microbicidal protein.

(C) JOURNAL: Infect. Immun.

(E) ISSUE: 60

(F) PAGES: 1202-1209

(G) DATE: 1992

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

Ser Asp Asp Pro Lys Glu Ser Glu Gly Asp Leu His Cys Val
10

Cys Val Lys Thr Thr Ser Leu Val Arg Pro Gly His Ile Thr Asn
20

Leu Glu Leu Ile Lys Ala Gly Gly His Cys Pro Thr Ala Asn Leu
30 40

Ile Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu Gln
50

Ala Ala Leu Tyr Lys Lys Lys Ile Ile Lys Lys Leu Leu Glu Ser
60 70

(2) INFORMATION FOR SEQ ID NO: 3:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 18

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-1

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = 28.23$; MW = 2162.76; number of charged amino acids: 8

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

Ala Leu Tyr Lys Lys Phe Lys Lys Lys Leu Leu Lys Ser Leu Lys
10
Arg Leu Gly

(2) INFORMATION FOR SEQ ID NO: 4:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 13

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-2

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = -131.33$; MW = 1638.06; number of charged amino acids: 7

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

Ala Arg Tyr Lys Lys Phe Lys Lys Lys Leu Leu Lys Ser
10

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 14

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-3

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = 64.90$; MW = 1820.33; number of charged amino acids: 7

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

Lys Leu Tyr Arg Lys Phe Lys Asn Lys Leu Leu Lys Leu Lys
10

(2) INFORMATION FOR SEQ ID NO: 6:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 13

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-4

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = -120.12$; MW = 1652.00; number of charged amino acids: 6

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

Ala Arg Tyr Arg Lys Phe Lys Asn Lys Ile Leu Lys Ser

10

(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 13

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-5

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = -99.56$; MW = 1708.02; number of charged amino acids: 6

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

Ala Arg Tyr Arg Lys Phe Arg Asn Lys Ile Leu Arg Ser

10

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 14

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-6

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = 144.45$; $MW = 1845.43$; number of charged amino acids: 8

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

Lys Leu Tyr Lys Lys Trp Lys Lys Lys Leu Leu Lys Leu Lys

10

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 13

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-7

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = -149.17$; MW = 1620.00; number of charged amino acids: 5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

Ala Leu Tyr Lys Lys Trp Lys Asn Lys Leu Leu Lys Ser

10

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 18

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-8

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = 16.32$; MW = 2287.86; number of charged amino acids: 9

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

Lys Leu Tyr Lys Lys Trp Lys Asn Lys Leu Lys Arg Ser Leu Lys

10

Arg Leu Gly

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 13

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-9

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = 41.45$; $MW = 1649.12$; number of charged amino acids: 6

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

Ala Leu Tyr Lys Lys Leu Phe Lys Lys Leu Leu Lys Arg

10

(2) INFORMATION FOR SEQ ID NO: 12:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 13

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-10

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = 8.13$; $MW = 1594.00$; number of charged amino acids: 5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

Gly Leu Tyr Lys Arg Leu Phe Lys Lys Leu Leu Lys Ser

10

(2) INFORMATION FOR SEQ ID NO: 13:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 13

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-11

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = 5.89$; MW = 1683.14; number of charged amino acids: 6

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:

Ala Leu Tyr Lys Arg Leu Phe Lys Lys Leu Lys Lys Phe

10

(2) INFORMATION FOR SEQ ID NO: 14:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 17

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-13

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = -204.18$; MW = 2131.70; number of charged amino acids: 7

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu Gln

10

Ala Ala Leu

(2) INFORMATION FOR SEQ ID NO: 15:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 8

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-14

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = -163.65$; mw = 1161.40; number of charged amino acids: 5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:

Arg Phe Glu Lys Ser Lys Ile Lys

(2) INFORMATION FOR SEQ ID NO: 16:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-T57-1

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = -87.64$; MW = 2463.00; number of charged amino acids: 4

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

Ser Ala Ile His Pro Ser Ser Ile Leu Lys Leu Glu Val Ile Cys

10

Ile Gly Val Leu Gln

(2) INFORMATION FOR SEQ ID NO: 17:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 14

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-15

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = -141.56$; MW = 1820.10; number of charged amino acids: 4

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:

Tyr Ala Glu Leu Arg Cys Thr Cys Ser Ile Lys Ala Glu Val

10

(2) INFORMATION FOR SEQ ID NO: 18:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: CS-1

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = -84.96$; MW = 1621.95; number of charged amino acids: 4

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

Lys Phe Lys His Tyr Phe Phe Trp Lys Tyr Lys

10

(2) INFORMATION FOR SEQ ID NO: 19:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: CS-2

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,
 $P_{MIC} = 322.69$; MW = 1487.80; number of charged amino acids: 3
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:

Lys Gly Tyr Phe Tyr Phe Leu Phe Lys Phe Lys

10

(2) INFORMATION FOR SEQ ID NO: 20:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: CS-3

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = -72.99$; MW = 1834.22; number of charged amino acids: 4

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

Lys Trp Lys Trp Trp Trp Trp Trp Lys Trp Lys

10

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 13

(B) TYPE: amino acid

(D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: peptide
(iii) HYPOTHETICAL: no
(v) FRAGMENT TYPE: internal fragment
(ix) FEATURE

(A) NAME/KEY: CS-NAP2

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = -1057.87$; MW = 1695.20; number of charged amino acids: 7

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:

Pro Arg Ile Lys Lys Ile Val Gln Lys Lys Leu Ala Gly

10

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: CS-RNTS-HEX

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = -2318.28$; MW = 2680.10; number of charged amino acids: 7

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:

Lys Trp Val Arg Glu Tyr Ile Asn Ser Leu Glu Met Ser Lys

10

Lys Gly Leu Ala Gly

(2) INFORMATION FOR SEQ ID NO:23:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: CS-MIP1 α -HX

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = -463.19$; MW = 2806.20; number of charged amino acids: 8

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:

Glu Trp Val Gln Lys Tyr Val Ser Asp Leu Glu Leu Ser Ala

10

Trp Lys Lys Ile Leu Lys

(2) INFORMATION FOR SEQ ID NO: 24:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 12

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: CS-MIP1 β

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

$P_{MIC} = -396.49$; MW = 1741.80; number of charged amino acids: 4

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:

Ser Trp Val Gln Glu Tyr Val Tyr Asp Leu Glu Leu

10

(2) INFORMATION FOR SEQ ID NO: 25:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 16

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: CS-FBP α

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = -78.53$; MW = 1806.90; number of charged amino acids: 5

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:

Ala Asp Ser Gly Glu Gly Asp Phe Leu Ala Glu Gly Gly Gly

10

Val Arg

(2) INFORMATION FOR SEQ ID NO: 26:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

005229" 9793460

- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
- (A) NAME/KEY: CS-FBP α -TET
- (C) IDENTIFICATION METHOD: By experiment
- (D) OTHER INFORMATION: microbicidal activities,
P_{MIC} = -248.89; MW = 2361.70; number of charged amino acids: 7
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 26:

Ala Asp Ser Gly Glu Gly Asp Phe Leu Ala Glu Gly Gly Gly

10

Val Arg Lys Leu Ile Lys

(2) INFORMATION FOR SEQ ID NO: 27:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 13
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
- (A) NAME/KEY: CS-FBP β
- (C) IDENTIFICATION METHOD: By experiment
- (D) OTHER INFORMATION: microbicidal activities,
P_{MIC} = -300.18; MW = 1630.50; number of charged amino acids: 5
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 27:

Glu Gly Val Asn Asp Asn Glu Gly Phe Phe Ser Ala

10

(2) INFORMATION FOR SEQ ID NO: 28:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 18

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: CS-TH β 4

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

P_{MIC} = -70.53; MW = 2468.80; number of charged amino acids: 12

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 28:

Lys Phe Asp Lys Ser Lys Leu Lys Lys Thr Glu Thr Gln Glu

10

Lys Asn Pro Leu

(2) INFORMATION FOR SEQ ID NO: 29:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

20

(ix) FEATURE

(A) NAME/KEY: RP-PMP1-42.56

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities,

$P_{MIC} = -75.30$; MW = 1895.40; number of charged amino acids: 6

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 29:

Ala Asn Leu Ile Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys

10

Leu

(2) INFORMATION FOR SEQ ID NO: 30:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 30

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: FX-PMP-2-45-74

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 30:

Ile Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu Gln

10

Ala Ala Leu Tyr Lys Lys Lys Ile Ile Lys Lys Leu Leu Glu Ser

20

(2) INFORMATION FOR SEQ ID NO: 31:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 47

(B) TYPE: amino acid

(D) TOPOLOGY: linear/fold

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: FX-PMP-2-28-74

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

Thr Asn Leu Glu Leu Ile Lys Ala Gly Gly His Cys Pro Thr Ala Asn

10

Leu Ile Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu Gln

20

30

Ala Ala Leu Tyr Lys Lys Lys Ile Ile Lys Lys Leu Leu Glu Ser

40

(2) INFORMATION FOR SEQ ID NO:32:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 32

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: FX-PMP-2-43-74

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

Asn Leu Ile Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu

10

Gln Ala Ala Leu Tyr Lys Lys Lys Ile Ile Lys Lys Leu Leu Glu Ser

20

30

(2) INFORMATION FOR SEQ ID NO: 33:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 16

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: FX-PMP-2-59-74

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 33:

Gln Ala Ala Leu Tyr Lys Lys Lys Ile Ile Lys Lys Leu Leu Glu Ser

10

(2) INFORMATION FOR SEQ ID NO: 34:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 28

(B) TYPE: amino acid

005280" 082500 01384960

- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
 - (A) NAME/KEY: RP-1+RP-1-10
 - (C) IDENTIFICATION METHOD: By experiment
 - (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 34:

Ala Leu Tyr Lys Lys Phe Lys Lys Lys Leu Leu Lys Ser Leu Lys Arg
10

Leu Gly Ala Leu Tyr Lys Lys Lys Leu
20

(2) INFORMATION FOR SEQ ID NO: 35:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 35
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
 - (A) NAME/KEY: RP-1:RP-13
 - (C) IDENTIFICATION METHOD: By experiment
 - (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 35:

005280" 91237950

- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
 - (A) NAME/KEY: 0C-RP-1
 - (C) IDENTIFICATION METHOD: By experiment
 - (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 37:

Cys Ala Leu Tyr Lys Lys Phe Lys Lys Lys Leu Leu Lys Ser Leu

Lys Arg Leu Gly

(2) INFORMATION FOR SEQ ID NO: 38:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 19
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
 - (A) NAME/KEY: 13C-RP-1
 - (C) IDENTIFICATION METHOD: By experiment
 - (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 38:

Ala Leu Tyr Lys Lys Phe Lys Lys Lys Leu Leu Lys Cys Leu Lys

Arg Leu Gly

(2) INFORMATION FOR SEQ ID NO: 39:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: 19C-RP-1

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 39:

Ala Leu Tyr Lys Lys Phe Lys Lys Lys Leu Leu Lys Ser Leu Lys Arg

Leu Gly Cys

(2) INFORMATION FOR SEQ ID NO: 40:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: 0C, 19C-RP-1

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 40:

Cys Ala Leu Tyr Lys Lys Phe Lys Lys Lys Leu Leu Lys Ser Leu Lys

Arg Leu Gly Cys

(2) INFORMATION FOR SEQ ID NO: 41:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 18

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-1-2R

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 41:

Ala Arg Tyr Lys Lys Phe Lys Lys Lys Leu Leu Lys Ser Leu Lys Arg

Leu Gly

(2) INFORMATION FOR SEQ ID NO: 42:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 18

(B) TYPE: amino acid

005230" 9T884960

- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
 - (A) NAME/KEY: RP-1-10F
 - (C) IDENTIFICATION METHOD: By experiment
 - (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 42:

Ala Leu Tyr Lys Lys Phe Lys Lys Lys Phe Leu Lys Ser Leu Lys Arg

Leu Gly

(2) INFORMATION FOR SEQ ID NO: 43:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 18
 - (B) TYPE: amino acid
 - (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
 - (A) NAME/KEY: RP-1-2R10F
 - (C) IDENTIFICATION METHOD: By experiment
 - (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 43:

Ala Arg Tyr Lys Lys Phe Lys Lys Lys Phe Leu Lys Ser Leu Lys Arg

Leu Gly

(2) INFORMATION FOR SEQ ID NO: 44:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 18

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-1-retro

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 44:

Gly Leu Arg Lys Leu Ser Lys Leu Leu Lys Lys Lys Phe Lys Lys

Tyr Leu Ala

(2) INFORMATION FOR SEQ ID NO: 45:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 17

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-13-retro

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 45:

Leu Ala Ala Gln Leu Asp Leu Cys Leu Lys Arg Gly Asn Lys Lys

Thr Ala

(2) INFORMATION FOR SEQ ID NO: 46:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 18

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: nRP-1:cRP-13

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 46:

Ala Leu Tyr Lys Lys Phe Lys Lys Lys Leu Cys Leu Asp Leu Gln

Ala Ala Leu

(2) INFORMATION FOR SEQ ID NO: 47:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 18

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: nRP-13:cRP-1

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 47:

Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Lys Ser Leu Lys

Arg Leu Gly

(2) INFORMATION FOR SEQ ID NO: 48:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-13-TET

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 48:

Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu Gln Ala

Ala Leu Tyr Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 49:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: 2,3R-RP-13-TET

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 49:

Ala Thr Arg Arg Asn Gly Arg Arg Leu Cys Leu Asp Leu Gln Ala

Ala Leu Tyr Arg Arg Arg

(2) INFORMATION FOR SEQ ID NO: 50:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: 7K-RP-13-TET

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 50:

Ala Thr Lys Lys Asn Gly Lys Lys Leu Cys Leu Asp Leu Gln Ala

Ala Leu Tyr Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 51:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: 12E-RP-13-TET

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 51:

Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Glu Leu Gln Ala

Ala Leu Tyr Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 52:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21

(B) TYPE: amino acid

[illegible]

(ix) FEATURE

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 52:

Ala Thr Glu Glu Asn Gly Arg Glu Leu Cys Leu Asp Leu Gln Ala

Ala Leu Tyr Glu Glu Glu

(2) INFORMATION FOR SEQ ID NO: 53:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: 12K-RP-13-TET

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 53:

Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Lys Leu Gln Ala

Ala Leu Tyr Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 54:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: 7E-RP-13-TET

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 54:

Ala Thr Lys Lys Asn Gly Glu Lys Leu Cys Leu Asp Leu Gln Ala

Ala Leu Tyr Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 55:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: 7G-RP-13-TET

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 55:

Ala Thr Lys Lys Asn Gly Gly Lys Leu Cys Leu Asp Leu Gln Ala

Ala Leu Tyr Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 56:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: 12G-RP-13-TET

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 56:

Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Gly Leu Gln Ala

Ala Leu Tyr Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 57:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21

(B) TYPE: amino acid

- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
- (A) NAME/KEY: 18F-RP-13-TET
- (C) IDENTIFICATION METHOD: By experiment
- (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 57:

Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu Gln Ala

Ala Leu Phe Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 58:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 21
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
- (A) NAME/KEY: 18W-RP-13-TET
- (C) IDENTIFICATION METHOD: By experiment
- (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 58:

Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu Gln Ala

Ala Leu Trp Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 59:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 21

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-13-TET-retro

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 59:

Lys Lys Lys Tyr Leu Ala Ala Gln Leu Asp Leu Cys Leu Lys Arg

Gly Asn Lys Lys Thr Ala

(2) INFORMATION FOR SEQ ID NO: 60:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-13-TRI

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 60:

Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu Gln Ala

Ala Leu Tyr Lys Lys

(2) INFORMATION FOR SEQ ID NO: 61:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: 3,4,8,19,20R-RP-13-TRI

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 61:

Ala Thr Arg Arg Asn Gly Arg Arg Leu Cys Leu Asp Leu Gln Ala

Ala Leu Tyr Arg Arg

(2) INFORMATION FOR SEQ ID NO: 62:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
- (A) NAME/KEY: 7K-RP-13-TRI
- (C) IDENTIFICATION METHOD: By experiment
- (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 62:

Ala Thr Lys Lys Asn Gly Lys Lys Leu Cys Leu Asp Leu Gln Ala

Ala Leu Tyr Lys Lys

(2) INFORMATION FOR SEQ ID NO: 63:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 20
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
- (A) NAME/KEY: 12E-RP-13-TRI
- (C) IDENTIFICATION METHOD: By experiment
- (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 63:

Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Glu Leu Gln Ala

Ala Leu Tyr Lys Lys

(2) INFORMATION FOR SEQ ID NO: 64:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: 3,4,8,19,20E-RP-13-TRI

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 64:

Ala Thr Glu Glu Asn Gly Arg Glu Leu Cys Leu Asp Leu Gln Ala

Ala Leu Tyr Glu Glu

(2) INFORMATION FOR SEQ ID NO: 65:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: 12K-RP-13-TRI

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 65:

Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Lys Leu Gln Ala

Ala Leu Tyr Lys Lys

(2) INFORMATION FOR SEQ ID NO: 66:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: 7E-RP-13-TRI

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 66:

Ala Thr Lys Lys Asn Gly Glu Lys Leu Cys Leu Asp Leu Gln Ala

Ala Leu Tyr Lys Lys

(2) INFORMATION FOR SEQ ID NO: 67:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
- (A) NAME/KEY: 7G-RP-13-TRI
- (C) IDENTIFICATION METHOD: By experiment
- (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 67:

Ala Thr Lys Lys Asn Gly Gly Lys Leu Cys Leu Asp Leu Gln Ala

Ala Leu Tyr Lys Lys

(2) INFORMATION FOR SEQ ID NO: 68:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 20
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
- (A) NAME/KEY: 12G-RP-13-TRI
- (C) IDENTIFICATION METHOD: By experiment
- (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 68:

Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Gly Leu Gln Ala

Ala Leu Tyr Lys Lys

(2) INFORMATION FOR SEQ ID NO: 69:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: 18F-RP-13-TRI

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 69:

Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu Gln Ala

Ala Leu Phe Lys Lys

(2) INFORMATION FOR SEQ ID NO: 70:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: 18W-RP-13-TRI

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 70:

Ala Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu Gln Ala

Ala Leu Trp Lys Lys

(2) INFORMATION FOR SEQ ID NO: 71:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-13-TRI-retro

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 71:

Lys Lys Tyr Leu Ala Ala Gln Leu Asp Leu Cys Leu Lys Arg

Gly Asn Lys Lys Thr Ala

(2) INFORMATION FOR SEQ ID NO: 72:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
- (A) NAME/KEY: RP-50
- (C) IDENTIFICATION METHOD: By experiment
- (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 72:

Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu Gln Ala Ala

Leu Tyr Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 73:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 20
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
- (A) NAME/KEY: RP-51
- (C) IDENTIFICATION METHOD: By experiment
- (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 73:

Thr Arg Arg Asn Gly Arg Arg Leu Cys Leu Asp Leu Gln Ala Ala

Leu Tyr Arg Arg Arg

(2) INFORMATION FOR SEQ ID NO: 74:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-52

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 74:

Thr Lys Lys Asn Gly Lys Lys Leu Cys Leu Asp Leu Gln Ala Ala

Leu Tyr Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 75:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-53

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 75:

Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Glu Leu Gln Ala Ala Leu

Tyr Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 76:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-54

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 76:

Thr Glu Glu Asn Gly Arg Glu Leu Cys Leu Asp Leu Gln Ala Ala

Leu Tyr Glu Glu Glu

(2) INFORMATION FOR SEQ ID NO: 77:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
- (A) NAME/KEY: RP-55
- (C) IDENTIFICATION METHOD: By experiment
- (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 77:

Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Lys Leu Gln Ala Ala

Leu Tyr Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 78:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 20
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
- (A) NAME/KEY: RP-56
- (C) IDENTIFICATION METHOD: By experiment
- (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 78:

Thr Lys Lys Asn Gly Glu Lys Leu Cys Leu Asp Leu Gln Ala Ala

Leu Tyr Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 79:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-57

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 79:

Thr Lys Lys Asn Gly Gly Lys Leu Cys Leu Asp Leu Gln Ala Ala

Leu Tyr Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 80:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-58

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 80:

Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Gly Leu Gln Ala Ala

Leu Tyr Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 81:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-59

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 81:

Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu Gln Ala Ala

Leu Phe Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 82:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20

(B) TYPE: amino acid

- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
- (A) NAME/KEY: RP-60
- (C) IDENTIFICATION METHOD: By experiment
- (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 82:

Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu Gln Ala Ala

Leu Trp Lys Lys Lys

(2) INFORMATION FOR SEQ ID NO: 83:

- (i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 20
- (B) TYPE: amino acid
- (D) TOPOLOGY: linear
- (ii) MOLECULE TYPE: peptide
- (iii) HYPOTHETICAL: no
- (v) FRAGMENT TYPE: internal fragment
- (ix) FEATURE
- (A) NAME/KEY: RP-61
- (C) IDENTIFICATION METHOD: By experiment
- (D) OTHER INFORMATION: microbicidal activities
- (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 83:

Lys Lys Tyr Leu Ala Ala Gln Leu Asp Leu Cys Leu Lys Arg Gly

Asn Lys Lys Thr Ala

(2) INFORMATION FOR SEQ ID NO: 84:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-62

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 84:

Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu Gln Ala Ala

Leu Tyr Lys Lys

(2) INFORMATION FOR SEQ ID NO: 85:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-63

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 85:

Thr Arg Arg Asn Gly Arg Arg Leu Cys Leu Asp Leu Gln Ala Ala

Leu Tyr Arg Arg

(2) INFORMATION FOR SEQ ID NO: 86:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-64

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 86:

Thr Lys Lys Asn Gly Lys Lys Leu Cys Leu Asp Leu Gln Ala Ala

Leu Tyr Lys Lys

(2) INFORMATION FOR SEQ ID NO: 87:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19

(B) TYPE: amino acid

- (D) TOPOLOGY: linear
(ii) MOLECULE TYPE: peptide
(iii) HYPOTHETICAL: no
(v) FRAGMENT TYPE: internal fragment
(ix) FEATURE
(A) NAME/KEY: RP-65
(C) IDENTIFICATION METHOD: By experiment
(D) OTHER INFORMATION: microbicidal activities
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 87:

Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Glu Leu Gln Ala Ala

Leu Tyr Lys Lys

(2) INFORMATION FOR SEQ ID NO: 88:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 19
(B) TYPE: amino acid
(D) TOPOLOGY: linear

- (ii) MOLECULE TYPE: peptide
(iii) HYPOTHETICAL: no
(v) FRAGMENT TYPE: internal fragment
(ix) FEATURE

- (A) NAME/KEY: RP-66
(C) IDENTIFICATION METHOD: By experiment
(D) OTHER INFORMATION: microbicidal activities
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 88:

Thr Glu Glu Asn Gly Arg Glu Leu Cys Leu Asp Leu Gln Ala Ala

Leu Tyr Glu Glu

(2) INFORMATION FOR SEQ ID NO: 89:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-67

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 89:

Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Lys Leu Gln Ala Ala

Leu Tyr Lys Lys

(2) INFORMATION FOR SEQ ID NO: 90:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-68

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 90:

Thr Lys Lys Asn Gly Glu Lys Leu Cys Leu Asp Leu Gln Ala Ala

Leu Tyr Lys Lys

(2) INFORMATION FOR SEQ ID NO: 91:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-69

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 91:

Thr Lys Lys Asn Gly Gly Lys Leu Cys Leu Asp Leu Gln Ala Ala

Leu Tyr Lys Lys

(2) INFORMATION FOR SEQ ID NO: 92:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19

(B) TYPE: amino acid

- (D) TOPOLOGY: linear
(ii) MOLECULE TYPE: peptide
(iii) HYPOTHETICAL: no
(v) FRAGMENT TYPE: internal fragment
(ix) FEATURE
 (A) NAME/KEY: RP-70
 (C) IDENTIFICATION METHOD: By experiment
 (D) OTHER INFORMATION: microbicidal activities
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 92:

Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Gly Leu Gln Ala Ala

Leu Tyr Lys Lys

(2) INFORMATION FOR SEQ ID NO: 93:

- (i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 19
 (B) TYPE: amino acid
 (D) TOPOLOGY: linear
(ii) MOLECULE TYPE: peptide
(iii) HYPOTHETICAL: no
(v) FRAGMENT TYPE: internal fragment
(ix) FEATURE
 (A) NAME/KEY: RP-71
 (C) IDENTIFICATION METHOD: By experiment
 (D) OTHER INFORMATION: microbicidal activities
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 93:

Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu Gln Ala Ala

Leu Phe Lys Lys

(2) INFORMATION FOR SEQ ID NO: 94:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-72

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 94:

Thr Lys Lys Asn Gly Arg Lys Leu Cys Leu Asp Leu Gln Ala Ala

Leu Trp Lys Lys

(2) INFORMATION FOR SEQ ID NO: 95:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 19

(B) TYPE: amino acid

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(iii) HYPOTHETICAL: no

(v) FRAGMENT TYPE: internal fragment

(ix) FEATURE

(A) NAME/KEY: RP-73

(C) IDENTIFICATION METHOD: By experiment

(D) OTHER INFORMATION: microbicidal activities

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 95:

Lys Lys Tyr Leu Ala Ala Gln Leu Asp Leu Cys Leu Lys Arg Gly

Asn Lys Lys Thr

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